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Date: 11/22/2010 11:54 AM
Subject: Comment on Proposed Plan for Omega Chemical Corporation Superfund Site

Hello Lynda:
This e-mail is in response to the EPA's invitation for public comments regarding the Proposed Plan for Operable Unit 2 (OU-2) at the Omega Chemical Corporation Superfund Site (Site). My comments are based on review of the Proposed Plan and the Feasibility Study (FS) for the Site, and are as follows:

1) Community Involvement: Participation by the affected community in the decision making process appears to be very limited for this site, which is extremely unfortunate given that the groundwater of the Central Basin, which is the regional public water supply, has been contaminated by the discharge that occurred at OU-1. In addition, the Preferred Alternative presented in the Proposed Plan (Plan) involves the discharge of treated groundwater to a municipal drinking water supply. The FS states that the City of Santa Fe Springs has indicated a "general willingness" to accept the treated water. This seems like a far cry from acceptance. It is not clear that the Southeast Water Coalition supports the Plan, or whether publicity about perchlorate contamination in the Barstow water supply will affect the posture of the Golden State Water Co.
The affected community also includes the customers of the municipal and private purveyors of drinking water that draw from the Central Basin. The impacts on this community from the EPA's decision on the preferred remedy, the Record of Decision (ROD), the final design of the remedy, and the operation and maintenance of the remedy are substantial and long-term. Technical assistance should be provided to the affected community so that the meaning of EPA's data, documents, and decisions can be communicated by a technical expert, and the community's viewpoint can be communicated to the EPA by someone on par with EPA's personnel.

2) Technical Assistance Programs: The Proposed Plan document mentions that a Technical Assistance Grant (TAG) is available for citizens who live near a Superfund site. The FS and the Proposed Plan characterize the Site and the surrounding areas as "predominantly commercial/industrial with minor residential land use." This is not correct. There is a substantial residential area in OU-2 roughly south of Florence Avenue, east of Pioneer Boulevard, north of the Imperial Highway, and west of Bloomfield Avenue. The Golden State Water Company has three impacted wells near Pioneer Boulevard, located roughly midway between Florence Avenue and the Golden State Freeway. This indicates that residential areas west of Pioneer Boulevard should be included in OU-2. In addition, there may be another impacted well south of the leading edge of the plume as shown in the FS, east of Norwalk Blvd. in the vicinity of San Antonio Dr. This indicates that OU-2 should be extended to the south of where it is

shown in the FS, and residential neighborhoods in Norwalk south of the Golden State Freeway should be included in OU-2.
A TAG requires application by a local non-profit organization to represent the local community. It appears that no non-profit organization has applied for and been accepted as the community representative for a TAG. Hopefully this will change as the CERCLA process proceeds. However the affected community, including the water agencies should be made aware that a Technical Advisor (TA) can be provided to the affected community by the EPA Technical Assistance Services for Communities (TASC) program. Because some municipal drinking water wells have been impacted, and the drinking water system is the proposed recipient of the treated groundwater, if no community group is formed to represent the community interest, a municipal agency may desire to fill this role. I understand there is precedent for this arrangement for at least one other Superfund site in a similar situation, where a municipal agency acts as the community representative. Regardless of how the TA services are funded, the TA should be acceptable to a community that is defined to include the water agencies.

3) Identification and Screening of Technology: Section 2.5.4 of the FS indicates that hydraulic barriers have not been considered in the technology screening process and selection of the preferred remedy. Hydraulic barriers are a common technology that is used to prevent seawater intrusion into groundwater aquifers in coastal regions of Southern California. Water is pumped from the aquifer and discharged (injected) back into the aquifer at locations intermediary between the extraction wells and the ocean. This creates a hydraulic head that counters the effects of aquifer depletion on saltwater intrusion, and can reverse the gradient where seawater intrusion has occurred, which can increase the capacity of the usable aquifer. This technology could be employed at the leading edge of the plume of contaminated groundwater. In such an application, water would be extracted down gradient from the leading edge of the plume and injected between the extraction wells and the leading edge of the plume. The plume expansion rate is estimated at 540 feet per year minimum, which means that the approximate location of the leading edge of the plume needs to be re-determined. Additionally, a numerical model must be used to design the shape and pumping rates of a barrier that would be effective, and determine if such a barrier would be feasible.

Application of hydraulic barrier technology could have several advantages for the local community:

- The numerical model needed to determine the feasibility of utilizing hydraulic barrier technology, and to optimize the design of a hydraulic barrier, already exists, which reduces implementation time if such a barrier is feasible.
- The system is uncomplicated, requires no treatment plant, and can be installed in 2011, well before the projected 2013 operational date of the OU-2 groundwater pump-and-treat system.
- As soon as it is operational, the hydraulic barrier would protect the aquifer down gradient of the plume, and begin to reverse the groundwater gradient toward the source areas north of the barrier.
- A hydraulic barrier would eliminate the need for leading edge extraction wells, which would reduce the flow of treated contaminated groundwater to the drinking

water system and thereby would reduce the risk of contaminating the drinking water system.

- Would allow serious consideration of Alternative 4, with leading edge groundwater injection north of the hydraulic barrier, because the potential for mobilizing sources down gradient of the plume would be eliminated. This would increase the options for locations of injection wells that may be needed to dispose of excess treated water that cannot be accepted by the drinking water system(s).

A hydraulic barrier also has several advantages to other stakeholders:

- By mobilizing down gradient contaminants toward the extraction systems to the north, the operational period of the pump-and-treat system and the overall cost of the remedy could be reduced.
- By eliminating the need for leading edge extraction wells, the cost of the piping from the leading edge extraction wells to the centrally located treatment plant could be eliminated.
- By reducing the flow to the treatment plant from about 2000 gallons per minute to about 1300 gallons per minute, the cost of the treatment plant would be reduced by a factor of approximately 75%-80%.

4) Technologies Retained for Consideration: Thermal oxidation is a technology retained in the FS for future consideration in the remedial design. Thermal oxidation should not be retained for consideration for the Site, because constituents of concern include chlorinated volatile organic compounds. Thermal oxidation, when used to treat vapors containing chlorinated compounds, has the potential to emit dioxin, a highly toxic carcinogen for which there is no known safe emission level. Because there is no known safe level of dioxin emissions, even if there were no dioxin detected in the thermal oxidizer off-gas, i.e., in the discharge from the "smoke stack", this could be because the dioxin levels are below the detection level, and not because they are absent. Dioxin levels too low to be detected by laboratory analysis could none-the-less be harmful.

5) Selection of the Preferred Alternative: The interests of the community may not have been adequately considered in selecting Alternative 6, Plume –wide Extraction with Drinking Water End Use, as the Preferred Alternative. There are a number of reasons why Alternative 4, Plume-wide Extraction with Reinjection, could be much more advantageous from a community perspective:

- The risk of contaminating the drinking water supply if there is an upset in the proposed groundwater treatment plant would be eliminated.
- Risk would be shifted away from the operator of the public drinking water supply system to the operator of the remedy.
- The operator of the groundwater treatment system would be economically incentivized to maintain excellent quality control/quality assurance procedures for operations and maintenance of the treatment plant.

There are also potential benefits to other stakeholders if a hydraulic barrier is included in the remedy design, and treated water is injected north of the hydraulic barrier. These include:

- Reduction of environmental risk because injection would be into a groundwater gradient moving toward the extraction wells. The economic penalty for injecting inadequately treated water would essentially be for prolonging the operation and maintenance period of the remedy, not for contaminating uncontaminated regions of the aquifer.
- Reduction of overall cost of the remedy.
- Shortening the operational period of the remedy.

Thank you, I appreciate having the opportunity to submit my comments to the EPA. My intent has been to offer a point of view that may have been missing from EPA's consideration, because there is no TA currently assigned to the community. If there is any way I can be of further assistance, please let me know.

Sincerely,

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